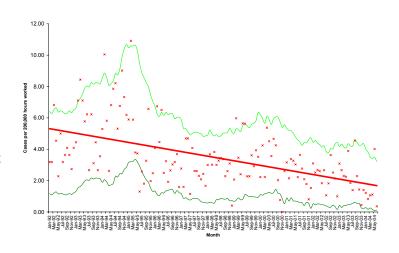
## **Berkeley Lab Accident Statistics**

# As Of July 27, 2004

Note that there are several different time frames for which injury data are presented: calendar year, fiscal year, and self-assessment performance year.

<u>Calendar year</u> data are most commonly used to compare accident rates in the US. The calendar year is used by the Bureau of Labor Statistics for national rates,

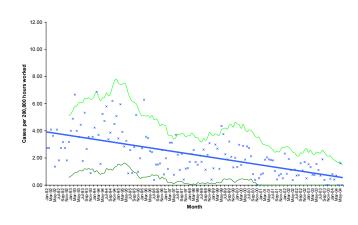


and almost every organization that engages in benchmarking will use annual data. Most of the data published by DOE also use the calendar year.

<u>Fiscal year</u> (October – September) data are used by DOE to measure Berkeley Lab performance under Appendix F, and to measure all contractors' quality of ISM implementation.

<u>Self-assessment year</u> (July – June) data are perhaps the most important for internal use at the Berkeley Lab, since all division performance is assessed on that basis.

### Other



Accident statistics are also displayed as moving averages, showing monthly rates and 12 months moving averages. In particular when combined with confidence limits, these graphs give the earliest indications of improving or deteriorating trends.

Compiled By Matt Kotowski

## **External Performance Measures**

External performance measures are the Appendix F accident prevention measure and two of the five criteria DOE uses to determine the quality of ISM implementation. These measures are tracked on a fiscal year basis.

### Appendix F

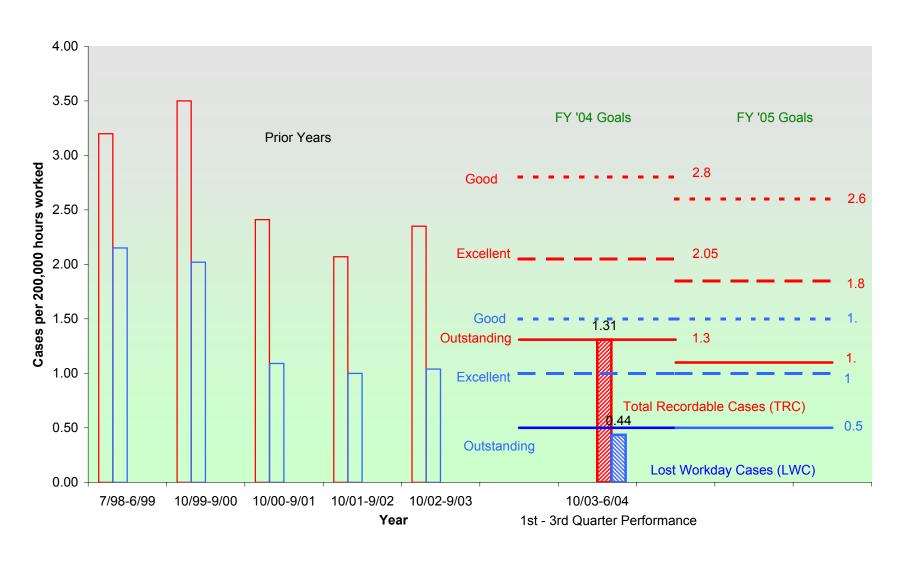
The graph on p. 3 shows current performance under the Appendix F accident prevention measure, as well as performance in prior fiscal years. Note that this is a 2-year measure.

The graphs on pp. 4 and 5 show the cumulative performance for the current fiscal year, compared to goals and the previous year's performance.

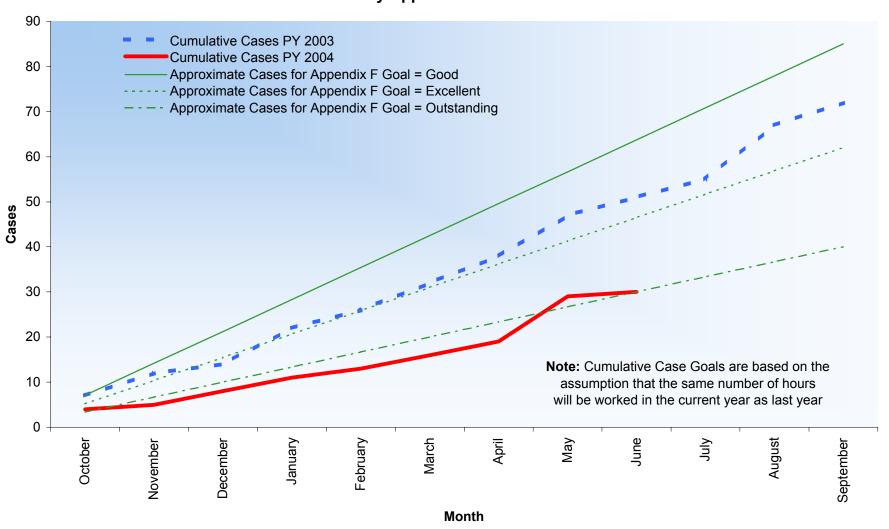
### <u>ISM Implementation – Cost Index</u>

DOE has discontinued the calculation of the cost index, and this measure will no longer be displayed here.

### Appendix F Accident Prevention Performance Based On Tentative 2004-2005 Goals



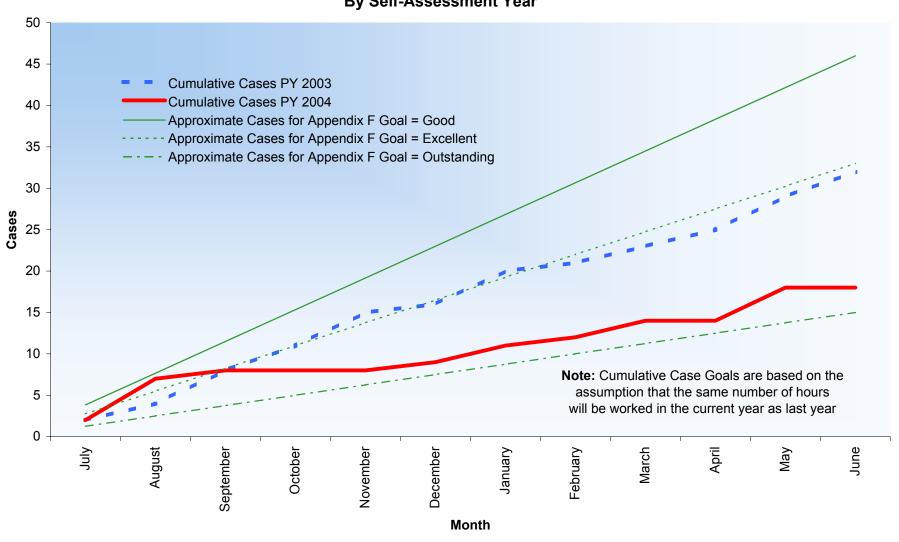
# Berkeley Lab & Contractors Cumulative Total Recordable Cases By Appendix F Year



Berkeley Lab & Contractors

Cumulative DART (Days Away, Restricted, Transferred) Cases

By Self-Assessment Year



### **Site-Wide Rates**

#### **Annual Rates**

The graph on p. 7 depicts Berkeley Lab TRC and DART rates, alongside corresponding rates for DOE Contractors. This graph shows the long-term trends most clearly.

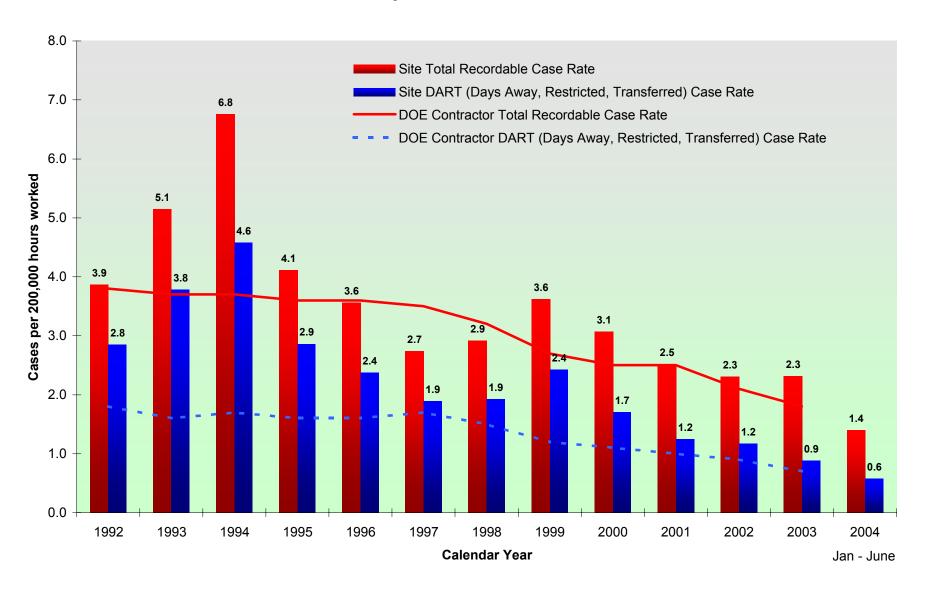
### TRC Moving Averages with Control Limits

The graph on p. 8 depicts the TRC 12-months moving average rate in red. Control limits are shown at the 95% confidence level. Variations in the monthly rates within the control limits are expected. Variations in the monthly rates that exceed the trigger points in the interpretation rules may be statistically significant and warrant further investigation. But note that 5% of monthly rates are statistically expected to fall outside of the confidence limits.

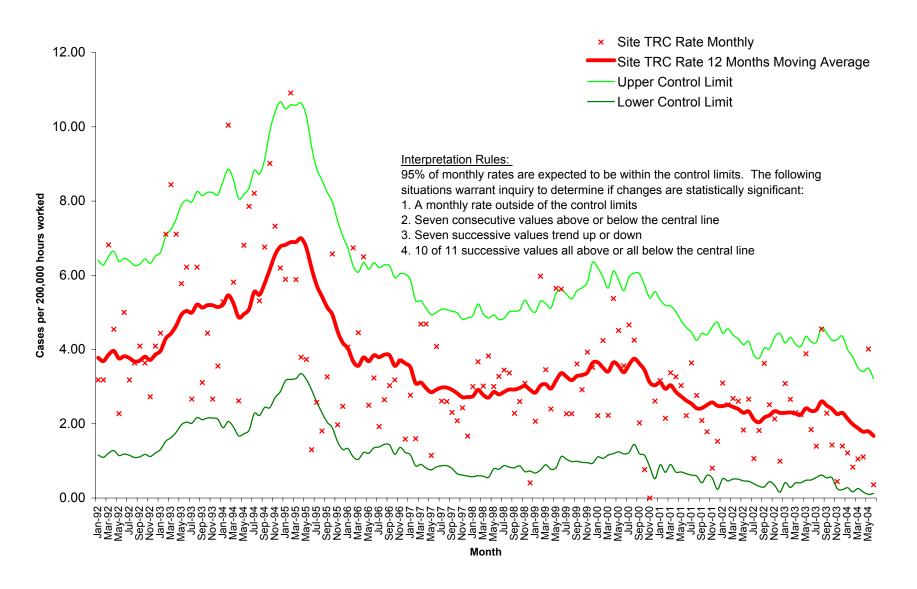
### **DART Moving Averages with Control Limits**

The graph on p. 9 depicts the DART 12-months moving average rate in blue. Control limits are shown at the 95% confidence level. Variations in the monthly rates within the control limits are expected. Variations in the monthly rates that exceed the trigger points in the interpretation rules may be statistically significant and warrant further investigation. But note that 5% of monthly rates are statistically expected to fall outside of the confidence limits.

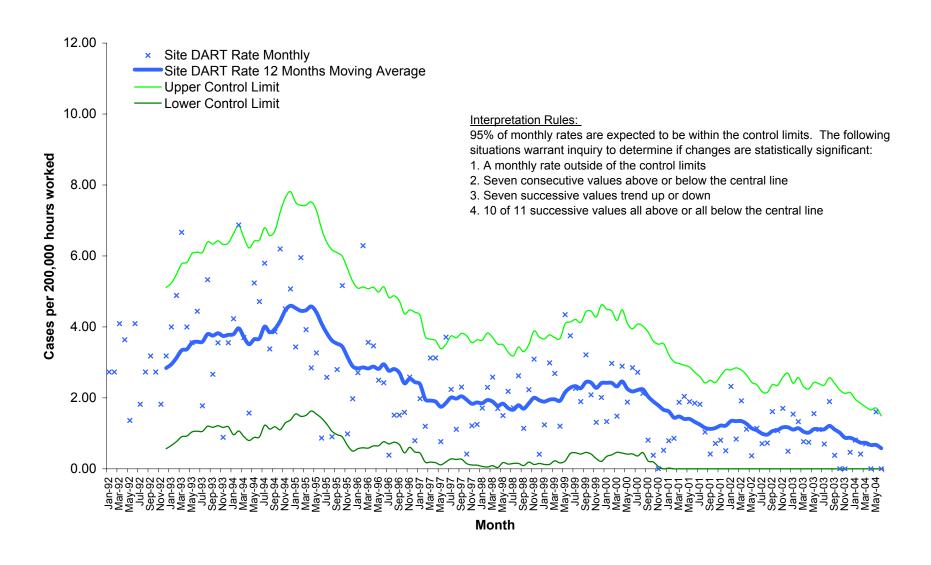
### **Berkeley Lab Site Accident Rates**



### Berkeley Lab Total Recordable Case Rates With Control Limits At 95% Confidence Level



# Berkeley Lab DART Rates With Control Limits At 95% Confidence Level (Cases with Days Away, Restricted or Transferred)



### **Self-Assessment**

Berkeley Lab self-assessment goals include two accident prevention measures – division performance for TRC and DART rates. The rates for the current performance year are the same as for the prior year. Credit is given for small numbers of accidents and (at year end) for improvement in performance. In prior years, the rates were tied to the Appendix F goals

Green = TRC rate below 1.97, DART rate below 1.13, or

Only one case, or

Improvement of 20% or more over the previous year.

Yellow = TRC rate between 1.97 and 3.28, DART rate between 1.13 and 1.88, or

Only 2 cases, or

Improvement of 10% or more over the previous year.

Red = TRC rate above 3.28, DART rate above 1.88, and

More than 2 cases, and

Improvement less than 10% over previous year.

#### TRC Performance

The graph on p. 11 shows the division performance for the self-assessment year to date, for the previous 2 self-assessment years. Goal Levels are indicated.

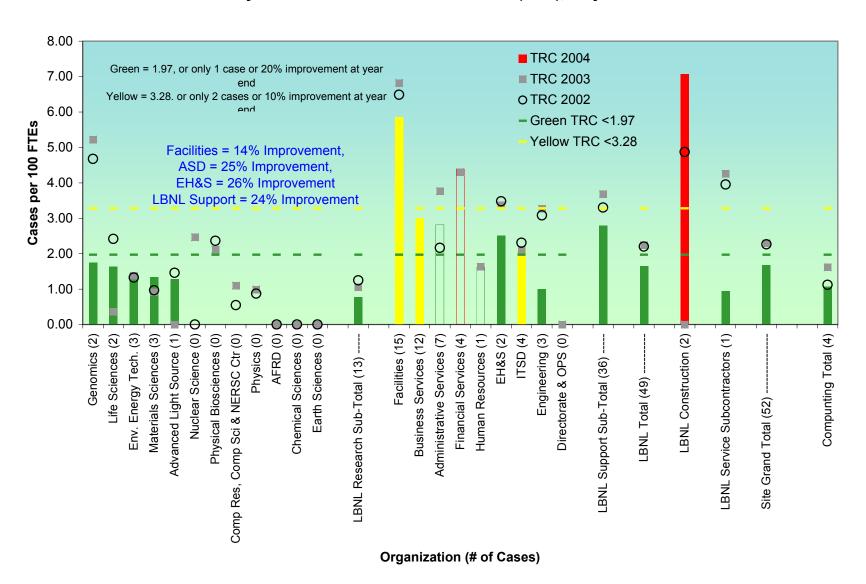
The graph on p. 12 shows the cumulative TRC performance for the current performance year, compared to goals and the previous year's performance.

#### DART Performance

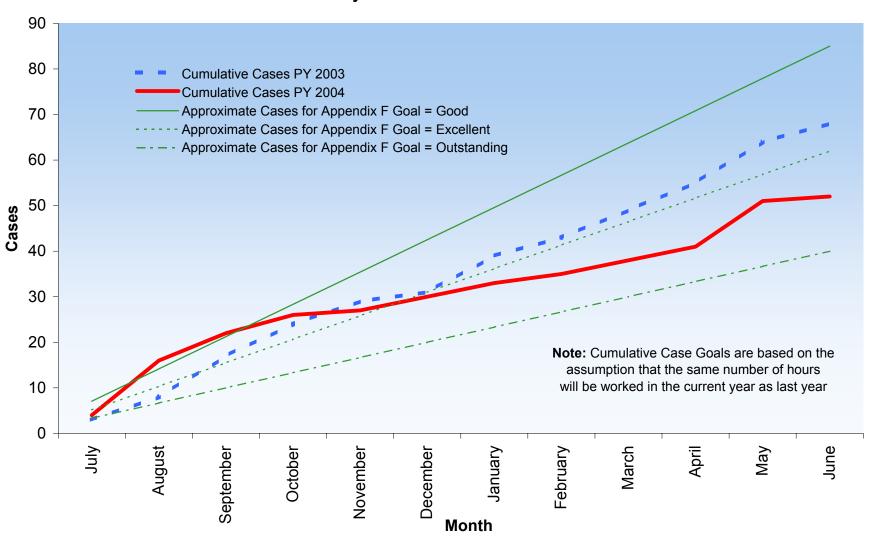
The graph on p. 13 shows the division performance for the self-assessment year to date, for the previous 2 self-assessment years. Goal Levels are indicated.

The graph on p. 14 shows the cumulative DART performance for the current performance year, compared to goals and the previous year's performance.

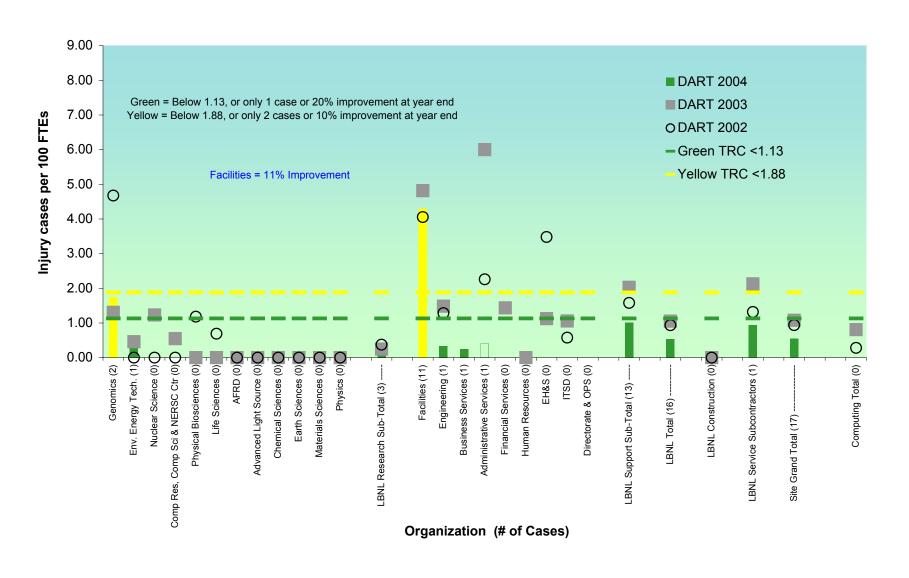
### Berkeley Lab Total Recordable Case Rates (TRC), July 2003 - June 2004



# Berkeley Lab & Contractors Cumulative Total Recordable Cases By Self-Assessment Year



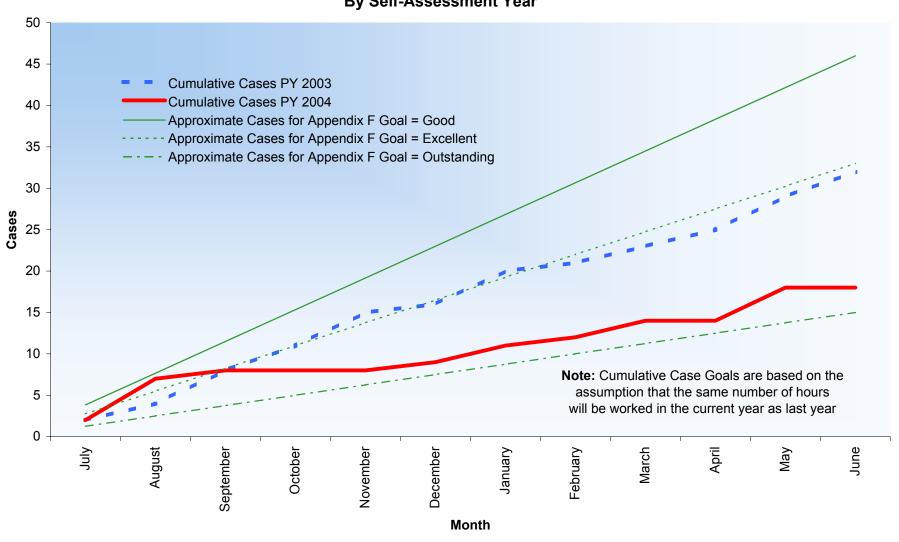
# Berkeley Lab Days Away, Restricted of Transferred Cases (DART) July 2003 - June 2004



Berkeley Lab & Contractors

Cumulative DART (Days Away, Restricted, Transferred) Cases

By Self-Assessment Year



### **Matrix Tables**

The matrix tables on pp. 16 and 17 are designed to summarize division performance with respect to Self-Assessment and Appendix F goals. The injuries for the Appendix F and Self-Assessment years to date are summarized on the right hand side, and they are compared to the estimated number of cases that will result in green and yellow ratings.

Total Recordable Cases are shown on p.16, DART Cases on p. 17.

### LBNL Total Recordable Cases July 1, 2003 - September 30, 2004

				Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	App F Year					
	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Self-A	ssessmer	nt Year	Total	Total Self-Assessment Go		Total		
		.3									.,					YTD	Green *	Yellow *	YTD		
Advanced Light Source	1	0	0	0	0	0	0	0	0	0	0	0				1	1	2	0		
AFRD	0	0	0	0	0	0	0	0	0	0	0	0				0	1	2	0		
Chemical Sciences	0	0	0	0	0	0	0	0	0	0	0	0				0	1	2	0		
Comp Res, Comp Sci & NERSC Ctr	0	0	0	0	0	0	0	0	0	0	0	0				0	3	6	0		
Earth Sciences	0	0	0	0	0	0	0	0	0	0	0	0				0	2	4	0		
Environmental Energy Tech.	0	2	0	0	0	0	0	0	0	1	0	0				3	4	7	1		
Genomics	0	0	0	0	0	0	1	0	1	0	0	0				2	1	2	2		
Life Sciences	0	1	0	1	0	0	0	0	0	0	2	0				4	5	9	3		
Materials Sciences	0	0	1	0	0	0	1	0	0	0	0	1				3	4	7	2		
Nuclear Science	0	0	0	0	0	0	0	0	0	0	0	0				0	1	2	0		
Physical Biosciences	0	0	0	0	0	0	0	0	0	0	0	0				0	1	3	0		
Physics	0	0	0	0	0	0	0	0	0	0	0	0				0	2	3	0		
LBNL Research Sub-Total	1	3	1	1	0	0	2	0	1	1	2	1	0	0	0	13	31	52	8		
Business Services	1	2	3	0	0	0	0	1	1	2	2	0	0	0	0	12	7	13	6		
ASD	0	2	2	0	0	0	0	1	1	1	0	0				7	5	8	3		
Financial Services	1	0	1	0	0	0	0	0	0	0	2	0				4	1	2	2		
Human Resources	0	0	0	0	0	0	0	0	0	1	0	0				1	1	2	1		
DIR/OPS	0	0	0	0	0	0	0	0	0	0	0	0				0	2	4	0		
Engineering	0	1	0	0	0	0	0	0	0	0	2	0				3	6	11	2		
Environment, Health & Safety	0	1	0	0	0	0	0	0	0	0	1	0				2	1	2	1		
Facilities	2	3	2	1	1	2	1	1	0	0	2	0				15	4	8	8		
ITS Div	0	1	0	1	0	1	0	0	0	0	1	0				4	3	6	3		
LBNL Support Sub-Total	3	8	5	2	1	3	1	2	1	2	8	0	0	0	0	36	26	43	20		
LBNL Total	4	11	6	3	1	3	3	2	2	3	10	1	0	0	0	49	58	96	28		
LBNL Construction	0	0	0	1	0	0	0	0	1	0	0	0				2	0	0	2		
LBNL Service Subcontractors	0	1	0	0	0	0	0	0	0	0	0	0				1	1	3	0		
Site Grand Total	4	12	6	4	1	3	3	2	3	3	10	1	0	0	0	52	60	100	30		
Prior Year Site Grand Total	3	5	9	7	5	2	8	5	6	5	8	5	5	11	5	68			72		
											*Green: Projected maximum cases to get a TRC rate of 1.97										

All Computing: 7 cases for Green, 12 cases for Yellow

\*Yellow: Projected maximum cases to get a TRC rate of 3.28

Notes: Projections assume that hours worked will remain constant Final division ratings will be subject to adjustment for other criteria

Data as of 07/08/2004

Color Gradation Key: 0

### LBNL DART (Days Away, Restricted, Transferred) Cases July 1, 2003 - September 30, 2004

				Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	App F Year						
	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Self-Assessment Year		Total Self-Assessr		ment Goals	Total				
		Ü									,					YTD	Green *	Yellow *	YTD			
Advanced Light Source	0	0	0	0	0	0	0	0	0	0	0	0				0	0	1	0			
AFRD	0	0	0	0	0	0	0	0	0	0	0	0				0	0	1	0			
Chemical Sciences	0	0	0	0	0	0	0	0	0	0	0	0				0	0	1	0			
Comp Res, Comp Sci & NERSC Ctr	0	0	0	0	0	0	0	0	0	0	0	0				0	2	3	0			
Earth Sciences	0	0	0	0	0	0	0	0	0	0	0	0				0	1	2	0			
Environmental Energy Tech.	0	1	0	0	0	0	0	0	0	0	0	0				1	2	4	0			
Genomics	0	0	0	0	0	0	1	0	1	0	0	0				2	0	1	2			
Life Sciences	0	0	0	0	0	0	0	0	0	0	0	0				0	3	5	0			
Materials Sciences	0	0	0	0	0	0	0	0	0	0	0	0				0	2	4	0			
Nuclear Science	0	0	0	0	0	0	0	0	0	0	0	0				0	0	1	0			
Physical Biosciences	0	0	0	0	0	0	0	0	0	0	0	0				0	1	1	0			
Physics	0	0	0	0	0	0	0	0	0	0	0	0				0	1	1	0			
LBNL Research Sub-Total	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	3	18	30	2			
Business Services	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	4	7	2			
ASD	0	0	0	0	0	0	0	0	1	0	0	0				1	3	5	1			
Financial Services	0	0	0	0	0	0	0	0	0	0	1	0				1	0	1	1			
Human Resources	0	0	0	0	0	0	0	0	0	0	0	0				0	0	1	0			
Directorate/OPS	0	0	0	0	0	0	0	0	0	0	0	0				0	1	2	0			
Engineering	0	0	0	0	0	0	0	0	0	0	1	0				1	3	6	1			
Environment, Health & Safety	0	0	0	0	0	0	0	0	0	0	0	0				0	1	1	0			
Facilities	2	3	1	0	0	1	1	1	0	0	2	0				11	2	4	5			
ITS Div	0	0	0	0	0	0	0	0	0	0	0	0				0	2	3	0			
	unininininininini																					
LBNL Support Sub-Total	2	3	1	0	0	1	1	1	1	0	4	0	0	0	0	14	15	25	8			
									unununununun													
LBNL Total	2	4	1	0	0	1	2	1	2	0	4	0	0	0	0	17	33	55	10			
LBNL Construction	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0			
LBNL Service Subcontractors	0	1	0	0	0	0	0	0	0	0	0	0				1	1	1	0			
	1010101010101010101						01010101010101010101		101010101010101010													
Site Grand Total	2	5	1	0	0	1	2	1	2	0	4	0	0	0	0	18	34	57	10			
Prior Year Site Grand Total	2	2	4	3	4	1	4	2	2	2	3	3	2	5	1	32			32			
											_											
		8									Green:	Projected	ojected maximum cases to get a DART rate of 1.13									

Notes: Projections assume that hours worked will remain constant
Final division ratings will be subject to adjustment for other criteria

All Computing: 4 cases for Green, 7 cases for Yellow

Yellow: Projected maximum cases to get a DART rate of 1.88

Data as of 07/08/2004

Color Gradation Key: 0

## **Site-Wide Ergonomics**

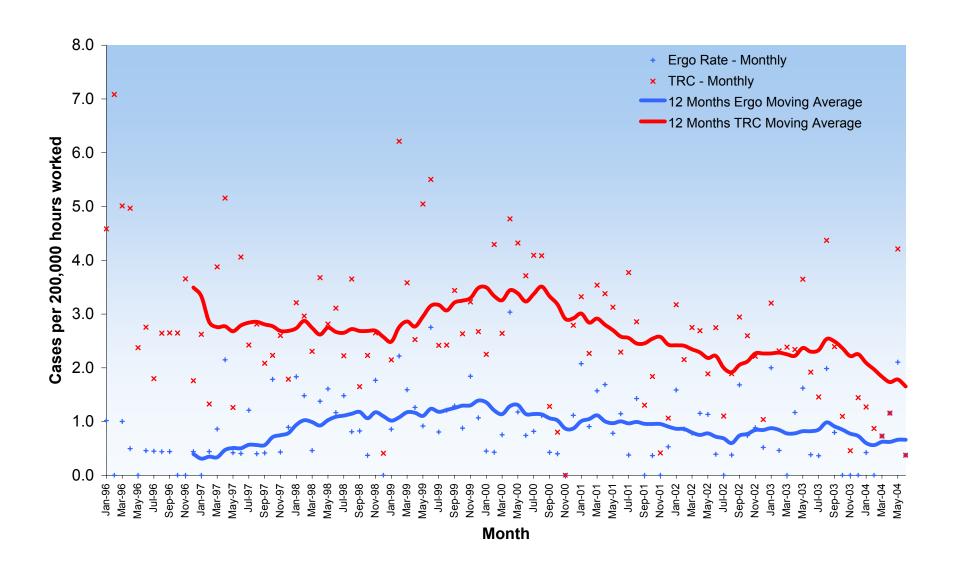
Ergonomic injuries represent about one third of all Berkeley Lab injuries.

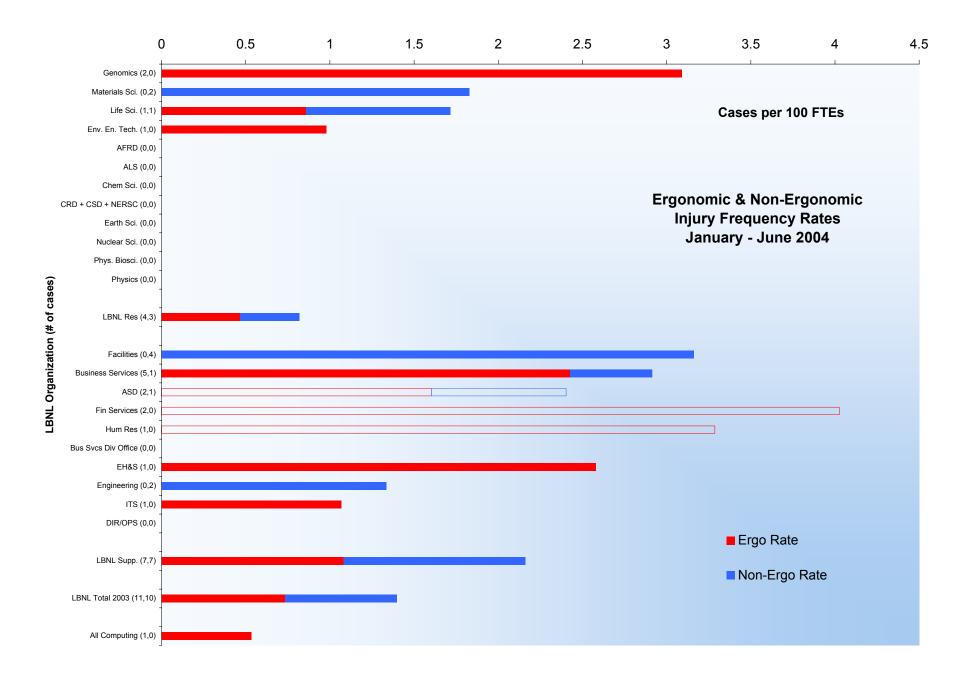
The graph on p. 19 depicts the ergonomic injury rates as well as the total recordable case rates as 12-months moving averages.

On p. 20 the breakdown of ergonomic vs. non-ergonomic injuries is shown for the divisions.

Additional information on ergonomic rates for specific divisions are available through Division EH&S Liaisons.

### **Berkeley Laboratory TRC & Ergonomics Rates**





## **Additional Division Charts**

Annually, the EH&S Division prepares a detailed analysis of injuries for each division at the Laboratory. This analysis is usually available in August or September.

Additional analyses and charts for individual divisions are available through the respective EH&S Division Liaison